

Air Quality Planning Guidance

Maidstone Borough Council

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Executive Summary

This Air Quality Planning Guidance for Maidstone borough has been adapted from guidance prepared by the Kent and Medway Air Quality Partnership. The KMAQP guidance aims to improve air quality and encourage emissions reduction through the planning process and also to provide a consistent approach across the Kent and Medway area as far as is practicable.

The Guidance provides developers and the wider community with clear information about Maidstone Borough Council's information requirements and its overall approach to determining planning applications in respect of air quality.

Key aspects of the guidance are;

- It sets out the process to be followed for assessing and addressing the air quality impacts of new development;
- It clarifies that quantifying the scale of mitigation measures needed is an important component of the air quality impact assessment process. Mitigation measures should be incorporated into the development's design;
- It supports Local Plan Policies DM6 – Air Quality and SP23 – Sustainable Transport.
- It emphasises that the pre-application advice stage should be used to highlight where development could have significant air quality impacts;

The guidance sets out the following staged process for the assessment of air quality impacts;

1. Use the 'Screening checklist' to screen out proposals which are unlikely to have a negative impact on air quality (Section 2, Checklists 1 &2)
2. For developments which are not screened out, use the 'Air quality and emission mitigation assessment checklist' to identify what further action and/or assessment is required. (Section 4)
3. Act on the outcomes of the assessment to ensure sufficient mitigation measures are delivered in conjunction with the development. (Sections 3 & 5)

The document is also available to download from the Council's website <INSERT LINK>. The template document on which this guidance has been based on is available on the Kent and Medway Air Quality Partnership website www.kentair.org.uk.

Maidstone Borough Council Contacts

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|--|--|
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Acknowledgements:

The Kent & Medway Air Quality Planning Guidance, upon which this Maidstone guidance is based, has been developed by using guidance documents produced by the Forest of Dean District Council, Sussex Air Quality Partnership and West Yorkshire Low Emissions Strategy Group with their permission

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1. Policy Context

Planning Policies

National Planning Policy Framework

- 1.1 The National Planning Policy Framework (NPPF) places a general presumption in favour of sustainable development, stressing the importance of local development plans. One of its 12 Core Planning Principles states that planning should:

“contribute to conserving and enhancing the natural environment and reducing pollution”, by: (paragraph 109) “preventing both new and existing development from contributing to or being put at unacceptable risk from, or being adversely affected by unacceptable levels of soil, air, water or noise pollution or land instability”.

- 1.2 It goes on to state (paragraphs 120 and 124) that:

“To prevent unacceptable risks from pollution and land instability, planning policies and decisions should ensure that new development is appropriate for its location. The effects (including cumulative effects) of pollution on health, the natural environment or general amenity and the potential sensitivity of the area or proposed development to adverse effects from pollution, should be taken into account.

Planning policies should sustain compliance with and contribute towards EU limit values or national objectives for pollutants, taking into account the presence of Air Quality Management Areas and the cumulative impacts on air quality from individual sites in local areas. Planning decisions should ensure that any new development in Air Quality Management Areas is consistent with local air quality action plans”.

Maidstone Borough Local Plan

- 1.3 In the Maidstone Borough Local Plan (2011-31), Policy DM6 – Air Quality sets out the triggers for an Air Quality Impact Assessment and requires the adverse air quality impacts resulting from development to be mitigated to acceptable levels. The policy takes a risk-based, sequential approach to assessing and addressing the air quality impacts of development.
- 1.4 The fact that a proposed development is within or close to an AQMA does not mean that it will necessarily impact negatively on air quality in the AQMA although it is important to recognise when such development might introduce additional people into an area of poor air quality. Conversely, development outside an AQMA could be of such a scale or nature that the air quality impacts could be significant if these are not sufficiently mitigated. Policy DM6 – Air Quality recognises these circumstances.
- 1.5 Addressing the air quality impacts of transport is an objective of Strategic Policy SP23 – Sustainable Transport whilst Policy DM21 – Assessing the Transport Impacts of Development requires mitigation measures to prevent the trips generated by a development having severe residual impacts.
- 1.6 This guidance will support the application of these Local Plan policies in the development management process.

Local Air Quality Management

- 1.7 The Kent & Medway Air Quality Partnership is funded by the Kent borough and district councils, Kent County Council and Medway Council and has the purpose of promoting air quality improvement in the county.
- 1.8 The Environment Act 1995 established the Local Air Quality Management (LAQM) regime. LAQM requires local authorities to review and assess ambient air quality in their areas against

health-based standards for a number of specific pollutants prescribed in the Air Quality Regulations 2000 and Air Quality (Amendment) Regulations 2002. If there is a risk that levels of air pollution in any part of the authority's area will be higher than the [National Objectives](#) , the authority is required to designate an Air Quality Management Area (AQMA). It is then required to produce an Air Quality Action Plan, which sets out the measures it intends to take in pursuit of the objectives. The boundary of an AQMA does not necessarily define the limit of the area of poor air quality. The only constraint on the boundary definition is that it should be at least as large as the area of exceedance, where there is relevant exposure.

Maidstone Air Quality Management Area

- 1.9 Maidstone Borough Council monitors the air quality across its area to identify if there are any breaches of the [National Objectives](#). This has resulted in the declaration of an Air Quality Management Area (AQMA) covering the urban area of Maidstone town (Appendix 1) based on high nitrogen dioxide (NO₂) levels. The boundaries of the AQMA are currently under review as part of the Council's draft Low Emissions Strategy (June 2017) which will incorporate its Air Quality Action Plan. The proposed revised boundary of the AQMA is also included in Appendix 1.

2. Is my development likely to have air quality impacts?

- 2.1. This guidance sets out a process to be followed to;
- 1) Identify whether the proposed development is likely to have a negative effect on air quality (Section 2 - checklist 1 and checklist 2) ;
 - 2) Measure the air quality impacts (Section 4 - Air Quality Impact Assessment incorporating Emissions Mitigation assessment)
 - 3) Secure mitigation measures which will address the measured air quality impacts (Section 3 – Standard Mitigation Requirements and Section 5 – Further Mitigation Measures)
- 2.2. At the outset, the pre-application process should be used to flag where a proposed development potentially could have significant air quality impacts. The Screening Checklist below should be used to exclude developments which are unlikely to have such negative effects and so do not require further air quality assessment.
- 2.3. The assessment is quick, simple and can be carried out by a developer or their agent. If you need any help in completing the checklists, then please contact MBC's Air Quality Officer.

Checklist 1: Screening checklist

| Questions | Outcome |
|--|--|
| Q1. Is the proposed development categorised as a major development ¹ ? | If Yes, go to Checklist 2 If No, go to Q2. |
| Q2. Is the proposed development within an Air Quality Management Area (AQMA) ² or within the Maidstone Urban Area ³ | If Yes, go to Checklist 2 If No, go to Q3. |
| Q3 Is the proposed development for a use which has the potential to have negative impacts on air quality? ('nature' in Policy DM6 ⁴) | If Yes, go to Checklist 2. If No, no mitigation required. |

- 2.4. Proposed developments which are not screened out through Checklist 1 should be considered against the questions in Checklist 2 below. Checklist 2 helps establish whether an Air Quality Impact Assessment (AQIA) and/or mitigation measures will be required by asking specific questions about where the scale, type and location of the proposed development. For reference, the boundaries of the Air Quality Management area and the Exceedance areas are shown in Appendix 1.
- 2.5. Note: Checklist 2 does not substitute for the requirements of the Environmental Impact Assessment (EIA) process which are set out in the relevant regulations⁵.

Checklist 2: Air quality and emissions mitigation assessment checklist

| Questions | Outcome |
|---|---------|
| <i>Development located in an Exceedance Area</i> | |

¹ 10+ dwellings/500+sqm commercial floorspace

² See Appendix 1

³ Defined in the Maidstone Borough Local Plan <ADD LINK TO POLICIES MAP>

⁴ Maidstone Borough Local Plan 2011-31

⁵ Town & Country Planning (Environmental Impact Assessment) Regulations 2017

| Questions | Outcome |
|--|--|
| <p>Q4. The development is located in the Exceedance Area AND</p> <ul style="list-style-type: none"> • it will generate additional traffic movements in the Exceedance Area or AQMA; OR • it creates additional dwelling/s; | <p>If YES to ANY of the criteria, AQIA (incorporating Emissions Mitigation Assessment) will be required.</p> <p>If NO, apply the standard mitigation requirements on page 8. [householder development excluded]</p> |
| <i>Development located in the AQMA</i> | |
| <p>Q5. The development is in the AQMA AND</p> <ul style="list-style-type: none"> • It requires an Environmental Impact Assessment (EIA); OR • The development is major sized development⁶; OR • There is vehicle parking in the development >50 spaces; OR • For existing roads with >10,000 Annual Average Daily Traffic (AADT) the development introduces extra vehicle movements (>5%)⁷, the development is it likely to cause congestion or introduce > 15 extra HGV movements per day; OR • The development will introduce new sensitive receptors⁸ into an AQMA; OR • The development could result in a significant cumulative effect on air quality in the AQMA when considered in combination with other consented or allocated developments in the vicinity; OR • The development would introduce biomass energy/heating plant; OR • The development is likely to impact on sensitive environments (e.g. SSSIs, SAC) | <p>If YES to ANY of the criteria, AQIA (incorporating Emissions Mitigation Assessment) will be required.</p> <p>If NO to ALL of the criteria AND the development will;</p> <ul style="list-style-type: none"> • generate additional traffic movements in the AQMA; OR • create additional dwelling/s; <p>apply the standard mitigation requirements on page 8.</p> |
| <i>Development outside the AQMA but within Maidstone Urban area</i> | |
| <p>Q6 The development lies outside the AQMA but within Maidstone Urban Area AND</p> <ul style="list-style-type: none"> • It requires an Environmental Impact Assessment (EIA); OR • The development is major sized development⁹; OR • There is vehicle parking in the development >100 spaces; OR • For existing roads with >10,000 Annual Average Daily Traffic (AADT) the development introduces extra vehicle movements (>5%)¹⁰, the development is it likely to cause congestion or introduce > 15 extra HGV movements per day; OR • The development could result in a significant cumulative effect on air quality in the AQMA when considered in combination with other consented or allocated developments in the vicinity; OR • The development would introduce biomass energy/heating plant; OR | <p>If YES, contact MBC's Air Quality Officer to confirm whether an AQIA (incorporating Emissions Mitigation Assessment) is required.</p> <p>If NO to ALL the criteria AND the development will generate additional traffic movements in the AQMA, apply the standard mitigation requirements on page 8.</p> |

⁶ Major sized category defined by Department of Transport indicative thresholds for transport assessments (see Appendix 2)

⁷ From Transport Impact Assessment

⁸ For example the elderly, children and people with health conditions which could be exacerbated by poor air quality

⁹ Major sized category defined by Department of Transport indicative thresholds for transport assessments (see Appendix 2)

¹⁰ From Transport Impact Assessment

| Questions | Outcome |
|--|---|
| <ul style="list-style-type: none"> The development is likely to impact on sensitive environments (e.g. SSSIs, SAC) | |
| Development outside Maidstone Urban Area | |
| <p>Q7 The development is outside Maidstone Urban Area AND</p> <ul style="list-style-type: none"> It requires an Environmental Impact Assessment (EIA); OR The development is a large scale major sized development¹¹; OR There are other consented or allocated developments in the vicinity of this development which could have a cumulative effect on air quality in the AQMA; OR There is vehicle parking in the development >100 spaces; OR For existing roads with >10,000 Annual Average Daily Traffic (AADT) the development introduces extra vehicle movements (>5%)¹², the development is likely to cause congestion or introduce > 15 extra heavy duty vehicle movements per day in the AQMA; OR The development would introduce biomass energy/heating plant; OR The development is likely to impact on sensitive environments (e.g. SSSIs, SAC) | <p>If YES, contact MBC's Air Quality Officer to confirm whether an AQIA (incorporating Emissions Mitigation Assessment) is required.</p> <p>If NO to ALL the criteria AND the development will generate additional traffic movements in the AQMA, apply the standard mitigation requirements on page 8.</p> |

3. Standard Mitigation Requirements

- 3.1. As set out in Checklist 2, standard mitigation will be required for certain types of development, including developments within the AQMA which will create new dwellings and/or create additional traffic movements in the AQMA. Developers will also be required to minimise dust emissions during the construction phase in accordance with the IAQM Guidance on the Assessment of Dust from Demolition and Construction.

Table 1: Standard Mitigation Requirements

| |
|---|
| <p>Residential: 1 Electric Vehicle charging point* per dwelling with dedicated parking or 1 charging point per 10 spaces (unallocated parking)</p> <p>Commercial/Retail/Industrial: 10% of parking spaces to be provided with Electric Vehicle charge points* which may be phased with 5% initial provision and the remainder at an agreed trigger level</p> <p>Demolition/Construction: Mitigation in accordance with the Institute of Air Quality Management (IAQM) Guidance on the Assessment of Dust from Demolition and Construction</p> |
|---|

¹¹ Large scale major development is one where the number of residential units to be constructed is 200 or more or 1,000 square metres of industrial, commercial or retail floor space. Where the number of residential units or floor space to be constructed is not given in the application a site area of 4 hectares or more should be used as the definition.¹¹

¹² From Transport Impact Assessment

Notes:

* this shall be the best technology available at the time of planning approval. See Appendix 4 for a EV charging point specification.

4. Air Quality Impact Assessment incorporating Emissions Mitigation Assessment

- 4.1. An Air Quality Impact Assessment (AQIA) is used to demonstrate whether the predicted air quality impacts of a development will be adverse for public health and/or the local environment and also the significance of that impact. All developments requiring an AQIA should also demonstrate how air quality impacts will be mitigated to acceptable levels. This is done by incorporating an Emissions Mitigation Assessment (EMA) into the AQIA.
- 4.2. The assessment should be carried out by a developer's air quality consultant. Applicants should always seek the latest information available on local air quality from MBC's Air Quality Officer.
- 4.3. There are key areas where the **magnitude** of change as well as the concentration of pollutants resulting from the proposed development could be a concern. In some cases, any additional contribution of emissions may worsen air quality and cause the creation of a new AQMA and, therefore, a small change in pollutant concentration can be as much a cause for concern as a large one. The areas of particular concern to consider are:
 - AQMAs
 - *Areas near to or adjacent to an AQMA and/or a candidate AQMA*
 - *Developments that require an EIA*

AQIA methodology.

- 4.4. An AQIA should clearly establish the likely change in pollutant concentrations at relevant receptors resulting from the proposed development during both the construction and operational phases. It should take into account the cumulative air quality impacts of committed developments (i.e. those with planning permission and Local Plan allocations).
- 4.5. For consistency, air quality assessments for developments should, where possible, follow similar methodologies. Guidance on the methodologies to be used for air quality assessments is available in the Department for Environment, Food and Rural Affairs (DEFRA) Technical Guidance LAQM TG(09). Further detail on the content of air quality assessments is also included in Appendix 3.
- 4.6. In overview;
 - The AQIA provides modelled predicted concentrations for scenarios (for the year of application and an agreed year of opening): 'without development (the baseline)', 'with development'; and 'with development including mitigation measures' to demonstrate predicted health exposure.
 - A comparison of the scenarios should be presented in the report. This will include comparison of the scenario 'without development (the baseline)' with the scenario 'with development including mitigation measures'
 - The difference in the compared scenarios is used to determine the classification of the change in air quality concentration. The scale or "magnitude" of change in pollutant concentration can be used to determine the significance of the air quality impact from a development.

- 4.7. The scale of air quality impact due to changes of concentration or if the additional concentration causes local exposure to approach or breach air quality objectives, determines the likely recommendations from the Air Quality Officer. The increase in pollutant concentration is compared to National Air Quality Objective (AQO) levels and pollutant increases are expressed as percentages in Table 2 to set the classification of impact to determine their significance.

Table 2 Classification of impacts due to changes in pollutant concentration.

| Classification of impact | Concentration change due to development: | Or if development contribution causes: |
|--------------------------|--|---|
| Very High | Increase > 10% | Worsening of air quality within an existing AQMA Creation of a new AQMA Introduction of new receptors within an existing AQMA |
| High | Increase > 5 – 10% | Levels to be within 5% AQO |
| Medium | Increase >1 <5 % | Levels to be within 10% AQO |
| Low/Imperceptible | Increase < 1% | - |

Note: Concentrations are relative to national air quality objective levels (AQO).

Emissions Mitigation Assessment

- 4.8. An Emissions Mitigation Assessment (EMA) is part of the AQIA and should be used to demonstrate how the air quality impacts of a development will be mitigated to acceptable levels as required by Policy DM6. In an EMA, the emissions resulting from the development are calculated using a standard formula (the 'Emissions Mitigation Calculation'). The result is an 'exposure cost value' (expressed in £) to be spent on mitigation measures. The applicant should specify the mitigation measures which will be incorporated in the development to the value of the 'exposure cost value'.
- 4.9. Developers will also be required to minimise dust emissions during the construction phase in accordance with the IAQM Guidance on the Assessment of Dust from Demolition and Construction.
- 4.10. The assessment should be carried out by a developer's air quality consultant. Please contact the Air Quality Officer for assistance.

Emissions Mitigation Calculation

- 4.11. The emissions mitigation calculation inputs the additional number of trips generated by the development into the latest DEFRA Emissions Factor Toolkit (EFT)¹³ which calculates the amount of transport related pollutant emissions a development is likely to produce. If the proposal is to include alternative fuels or technology i.e. LPG, EV etc, then there are "advanced options" within the EFT to accommodate this. The output is given in kg of specified pollutant per year and requires converting to tonnes per year. The output is then multiplied by the Interdepartmental Group on Costs and Benefits (IGCB) damage costs¹⁴ for the key pollutants nitrogen oxides (NOx) and particulates (PM10). Finally the emissions total is then multiplied by 5 to provide a 5 year exposure cost value which is the amount (value) of mitigation that is expected to be spent on measures to mitigate those impacts. This value is used for costing the required emissions mitigation for the development.

¹³ <http://laqm.defra.gov.uk/review-and-assessment/tools/emissions.html>

¹⁴ <http://www.gov.uk/guidance/air-quality-economic-analysis>

Table 3 Formula for Emissions Mitigation Calculation

| |
|---|
| <p>Emissions Mitigation Calculation</p> <p>EFT output x Damage costs x 5 years = 5 year exposure cost value (in £)</p> |
|---|

- 4.12. The result of the calculation is a monetary value which the developer should spend on air quality mitigation measures. The measures should be incorporated into the scheme design.

Example emissions mitigation calculation

- 4.13. The following example demonstrates the calculation based on a development with 10 domestic properties within an AQMA using version 7 of the EFT.

Table 4 Example emissions mitigation calculation

| |
|---|
| <p>EFT input factors:</p> <p>10 Household (urban not London) (2015) (NOx and PM10)</p> <p>27 (trip/traffic ratio for 10 houses)</p> <p>cars only (0% HGV)</p> <p>50 kph (average speed)</p> <p>10km (NTS UK average.)</p> <p>EFT output = 34.74 kg/annum (NOx) and 3.39 kg/annum (PM10)</p> <p>= 0.03474 tonnes/annum (NOx) and 0.00339 tonnes/annum (PM10)</p> <p>x Damage cost £21,044/tonne (NOx) and £58,125/tonne (PM10)</p> <p>=£731.07 + £197.04</p> <p>x 5 (years)</p> <p>= £3655.34 +£985.21</p> <p>Total = £4,640</p> |
|---|

Notes:

- Trip rates can be sourced from transport assessment or local authority/transport authority.
- Trip length uses the 2014 National Travel Survey (NTS)¹⁵UK average = 7.3miles/10km
- The IGCB damage costs used are the IGCB Air Quality Damage Costs per tonne, 2015 prices (Central estimate: NOx = £21,044/tonne and PM10 £58,125/tonne Transport Average).

¹⁵ <https://www.gov.uk/government/collections/national-travel-survey-statistics>

Emissions Mitigation Statement

- 4.14. The results of the EMA should be presented in the form of an Emissions Mitigation Statement.

Table 5 Content of Emissions Mitigation Statement

| |
|--|
| <p>Emissions Mitigation Statement</p> <p>The statement must include:</p> <ul style="list-style-type: none">• Development traffic input data for emissions mitigation calculation• Emissions calculation and totals• Details of the mitigation proposed which should be equivalent to the value of emissions calculation (see Section 5)• Statement of provision required to minimise dust emissions in accordance with the IAQM Guidance on the Assessment of Dust from Demolition and Construction. |
|--|

- 4.15. Mitigation measures should be incorporated into the design of the development. If this is not achieved, the Council will secure the mitigation measures through a planning condition(s). If sufficient on-site mitigation is demonstrably not possible then the Council may seek contribution to wider air quality mitigation measures through a section 106 agreement.

5. Further Mitigation Measures

- 5.1. Table 6 lists mitigation measures to be considered. The list is not exhaustive and further options may be suggested by MBC's Air Quality Officer which are appropriate to the scale and nature of development and local air quality issues with the aim of maximising the effectiveness of the measures which are secured. The developer may also suggest alternative mitigation options not listed above provided that they clearly show the air quality benefits.
- 5.2. The mitigation measures selected should be relevant and appropriate to:
- Any local policies and strategies, including measures in the Air Quality Action Plan/Low Emissions Strategy, which may help determine the mitigation priorities which should be incorporated within a particular scheme.
 - Any local air quality concerns; to assist in the mitigation of potential cumulative air pollution impacts of the development on the local community.
 - The type, size and activity of the development.
- 5.3. Scheme mitigation should be provided within the design of the development where possible.

Table 6 Mitigation measures

| |
|---|
| <p>Standard mitigation (Table 1) plus: -</p> <p>All development</p> <ul style="list-style-type: none">• Site layout adaptations to increase the separation between development and the sources of air pollution• Using green infrastructure, in particular trees* to absorb dust and other pollutants <p>Residential</p> <ul style="list-style-type: none">• Travel plan (where required) including mechanisms for discouraging high emission vehicle use and encouraging the uptake of low emission fuels and technologies• A Welcome Pack available to all new residents online and as a booklet, containing information and incentives to encourage the use of sustainable transport modes from new occupiers• EV recharging infrastructure** within the development (wall mounted or free standing in-garage or off-street points)• Renewable energy technologies• Car club provision within development or support given to local car club/eV car clubs• Designation of parking spaces for low emission vehicles• Improved cycle paths to link cycle network• Adequate provision of secure cycle storage <p>Commercial/Industrial</p> <p>As above plus: -</p> <ul style="list-style-type: none">• Public transport subsidy for employees• Support local walking and cycling initiatives• On-street EV recharging**• Contributing funding to measures, including those identified in air quality action plans and low emission strategies, designed to offset the impact on air quality arising from new development <p>Additional mitigation</p> <ul style="list-style-type: none">• Contribution to low emission vehicle refuelling infrastructure• Low emission bus service provision or waste collection services• Bike/e-bike hire schemes• Contribution to renewable fuel and energy generation projects• Incentives for the take-up of low emission technologies and fuels <p>*For guidance on selecting the best air quality species please refer to the Urban Air Quality 2012 Woodland Trust document</p> |
|---|

Notes

** this shall be the best technology available at the time of planning approval. See Appendix 4 for an EV charging point specification.

6. Planning considerations

- 6.1. The AQIA process, incorporating the Emissions Mitigation Assessment, should be used to evidence the specific changes in air quality due to a single development or from the cumulative effect of several developments and to confirm the mitigation measures which will be put in place to address the impacts.

- 6.2. In determining a planning application, the objective will be to ensure that the air quality in existing AQMAs does not worsen by the introduction of a development and/or that there is no additional air pollution burden from a development(s) which could create new AQMAs.
- 6.3. The decision on a planning application must be a balance of all material considerations depending upon the individual merits and circumstances. The weight to be given to the impact on air quality in the consideration of a planning application and the acceptability of proposed mitigation measures lies with Maidstone Borough Council as the local planning authority.
- 6.4. Refusal of a planning application may still result if air quality impacts from a development remain, even after all reasonable means to mitigate the impacts on air quality have been exhausted having regard to the relevant Local Plan policies and national planning policy requirements.
- 6.5. The following table summarises the potential planning requirements and outcomes

Table 7 Planning requirements and outcomes.

| Magnitude of change in air quality | Likely requirements | Likely outcomes |
|------------------------------------|--|--|
| Very High | Require evidence to show that mitigation will address air quality impacts. If impact of development on air quality still very high = strong presumption for recommendation for refusal on air quality grounds. | Air Quality Officer (AQO) to recommend refusal |
| High | Seek mitigation to significantly reduce air quality impacts. Mitigation to include reducing exposure through various measures, emissions reduction technologies and/or development redesign. | AQO to recommend refusal unless significant mitigation measures are secured. |
| Medium | Seek mitigation to reduce air quality impacts. Mitigation to include reducing exposure through various measures, emissions reduction technologies and/or development redesign. | Ensure mitigation is secured as part of a planning consent. |
| Low/Imperceptible | Recommend the minimum mitigation for development scheme type. | Ensure mitigation is secured as part of a planning consent. |

References

The Air Quality Standards Regulations 2010

<http://www.legislation.gov.uk/uksi/2010/1001/contents/made>

The Air Quality Strategy for England, Scotland, Wales and Northern Ireland (2007)

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/69336/pb12654-air-quality-strategy-vol1-070712.pdf

Guidance on the assessment of dust from demolition and construction – IAQM (2014)

<http://www.iaqm.co.uk/text/guidance/construction-dust-2014.pdf>

DEFRA Emissions Factor Toolkit

<http://laqm.defra.gov.uk/review-and-assessment/tools/emissions-factors-toolkit.html>

DEFRA Impact pathway guidance for valuing changes in air quality (2013)

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/197900/pb13913-impact-pathway-guidance.pdf

DEFRA Interdepartmental Group on Costs and Benefits

<https://www.gov.uk/air-quality-economic-analysis>

DEFRA Technical Guidance Note LAQM TG (09)

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/69334/pb13081-tech-guidance-laqm-tg-09-090218.pdf

Environmental Impact Assessment Directive

<http://ec.europa.eu/environment/eia/eia-legalcontext.htm>

European Union Limit Values

<http://ec.europa.eu/environment/air/quality/standards.htm>

Electric Vehicle (EV) Network

<http://www.ev-network.org.uk/>

HM Treasury, Valuing impacts on air quality – Supplementary Green Book Guidance (2013)

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/197893/pu1500-air-quality-greenbook-supp2013.pdf

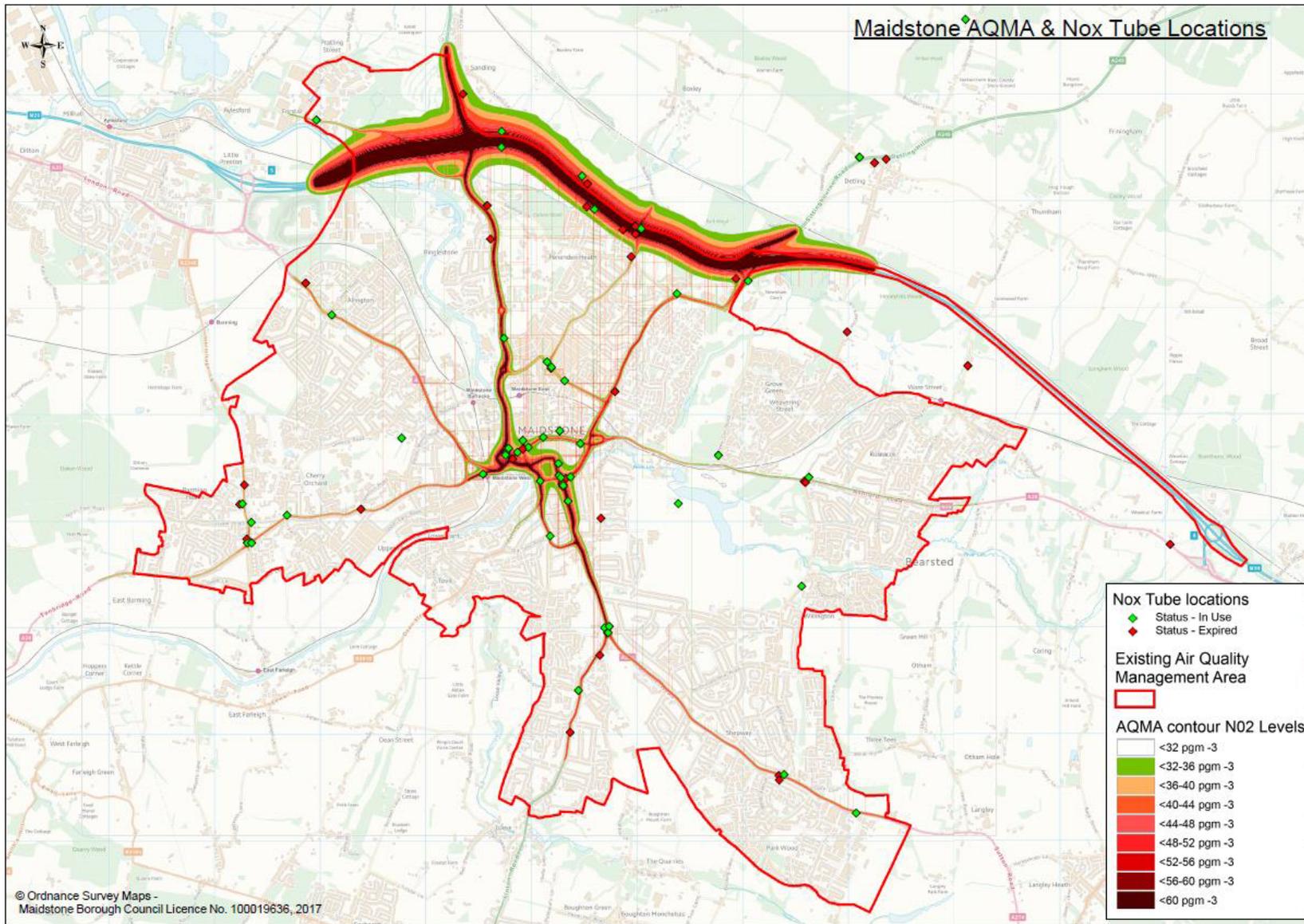
National Planning Policy Framework (NPPF) March 2012

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/6077/2116950.pdf

Town and Country Planning (Development Management Procedure) (England) Order 2010

http://www.legislation.gov.uk/uksi/2010/2184/pdfs/uksi_20102184_en.pdf

Appendix 1 – Map of Maidstone AQMA (existing and proposed)



Appendix 2 - Criteria for Development Classification

The major sized category is determined using criteria from the Department for Transport indicative thresholds for transport assessments⁴.

Table 1: Criteria for Development Classification

| Land Use | Description | Further Assessment Required |
|--|--|-----------------------------|
| Food Retail (A1) | Retail sale of food goods to the public - supermarkets, superstore, convenience food store | >800m ² |
| Non-Food Retail (A1) | Retail sale of non-food goods to the public; but includes sandwich bars or other cold food purchased and consumed off site | >1500m ² |
| Financial and professional services (A2) | Banks, building societies and bureaux de change, professional services, estate agents, employment agencies, betting shops | >2500m ² |
| Restaurants and Cafes (A3) | Use for the sale of food consumption on the premises | >2500m ² |
| Drinking Establishments (A4) | Use as a public house, wine-bar for consumption on or off the premises | >600m ² |
| Hot Food Takeaway (A5) | Use for the sale of hot food for consumption on or off the premises | >500m ² |
| Business (B1) | (a) Offices other than in use within Class A2 (financial & professional) (b) Research & Development - laboratories, studios (c) Light industry | >2500m ² |
| General Industrial (B2) | General industry (other than B1) | >4000m ² |
| Storage and Distribution (B8) | Storage and distribution centres - wholesale warehouses, distribution centres and repositories | >5000m ² |
| Hotels (C1) | Hotels, boarding houses and guest houses | >100 bedrooms |
| Residential Institutions (C2) | Hospitals, nursing homes used for residential accommodation and care | >50 beds |
| Residential Institutions (C2) | Boarding schools and training centres | >150 students |
| Residential Institutions (C2) | Institutional hostels, homeless centres | >400 residents |
| Dwelling houses (C3) | Dwellings for individuals, families or not more than six people in a single household | >50 units |
| Non-Residential Institutions (D1) | Medical & health services, museums, public libraries, art galleries, non-residential education, places of worship and church halls | >1000m ² |
| Assembly and Leisure (D2) | Cinemas, dance and concert halls, sports halls, swimming, skating, gym, bingo, and other facilities not involving motorised vehicles or firearms. | >1500m ² |

⁴ <http://webarchive.nationalarchives.gov.uk/+http://www.dft.gov.uk/adobepdf/165237/202657/guidanceontaappendixb>

| Other |
|---|
| 1. Any development generating 30 or more two-way vehicle movements in any hour |
| 2. Any development generating 100 or more two-way vehicle movements per day |
| 3. Any development proposing 100 or more parking spaces |
| 4. Any relevant development proposed in a location where the local transport infrastructure is inadequate |
| 5. Any relevant development proposed in a location adjacent to an Air Quality Management Area (AQMA) |

Appendix 3 - Air Quality Assessment Protocol to Determine the Impact of Vehicle Emissions from Development Proposals

An air quality assessment should clearly establish the likely change in pollutant concentrations at relevant receptors resulting from the proposed development during both the construction and operational phases. It must take into account the cumulative air quality impacts of committed developments (i.e. those with planning permission and Local Plan allocations).

Key Components of an Air Quality Assessment

The assessment will require dispersion modelling utilising agreed monitoring data, traffic data and meteorological data. The modelling should be undertaken using recognised, verified local scale models by technically competent personnel and in accordance with LAQM TG.09. The study will comprise of:

1. The assessment of the existing air quality in the study area for the baseline year with agreed receptor points and validation of any dispersion model;
2. The prediction of future air quality without the development in place (future baseline or do nothing);
3. The prediction of future road transport emissions and air quality with the development in place (with development or do-something).
4. The prediction of future road transport emissions and air quality with the development (with development or do-something) and with identified mitigation measures in place.

The assessment report should include the following details:

A. A detailed description of the proposed development, including:

- Identify any on-site sources of pollutants;
- Overview of the expected traffic changes;
- The sensitivity of the area in terms of objective concentrations;
- Local receptors likely to be exposed;
- Pollutants to be considered and those scoped out of the process.

B. The relevant planning and other policy context for the assessment.

C. Description of the relevant air quality standards and objectives.

D. The assessment method details including model, input data and assumptions:

For traffic assessment;

- Traffic data used for the assessment;
- Emission data source;
- Meteorological data source and representation of area;
- Baseline pollutant concentration including any monitoring undertaken;
- Background pollutant concentration;
- Choice of base year;
- Basis for NO_x:NO₂ calculations;
- A modelling sensitivity test for future emissions with and without reductions;

For point source assessments:

- Type of plant;
- Source of emission data and emission assumptions;
- Stack parameters – height, diameter, emission velocity and exit temperature;
- Meteorological data source and representation of area;

- Baseline pollutant concentrations;
- Background pollutant concentrations;
- Choice of baseline year;
- Basis for deriving NO₂ from NO_x.

E. Model verification for all traffic modelling following DEFRA guidance LAQM.TG (09):

F. Identification of sensitive locations:

G. Description of baseline conditions:

H. Description of demolition/construction phase impacts:

I. Summary of the assessment results:

- Impacts during the demolition/construction phase;
- Impacts during the operation phase;
- The estimated emissions change of local air pollutants;
- Identified breach or worsening of exceedences of objectives (geographical extent)
- Whether Air Quality Action Plan is compromised;
- Apparent conflicts with planning policy and how they will be mitigated.

J. Mitigation measures [by using Emissions Mitigation Assessment]

Air Quality Monitoring

In some cases it will be appropriate to carry out a short period of air quality monitoring as part of the assessment work. This will help where new exposure is proposed in a location with complex road layout and/or topography, which will be difficult to model or where no data is available to verify the model. Monitoring should be undertaken for a minimum of six months using agreed techniques and locations with any adjustments made following Defra Technical Guidance LAQM.TG (09).

Assessing Demolition/Construction Impacts

The demolition and construction phases of development proposals can lead to both nuisance dust and elevated fine particulate (PM₁₀ and PM_{2.5}) concentrations. Modelling is not appropriate for this type of assessment, as emission rates vary depending on a combination of the construction activity and meteorological conditions, which cannot be reliably predicted. The assessment should focus on the distance and duration over which there is a risk that impacts may occur. The Institute of Air Quality Management (IAQM)⁵ has produced a number of definitive guidance documents to which this guidance refers. The document 'Guidance on the Assessment of the Impacts of Construction on Air Quality and the Determination of their Significance' should be the reference for reporting the construction assessment.

Cumulative Impacts

The NPPF (paragraph 124) recognises that a number of individual development proposals within close proximity of each other require planning policies and decisions to consider the cumulative impact of them. Difficulties arise when developments are permitted sequentially, with each individually having only a relatively low polluting potential, but which cumulatively result in a significant worsening of air quality. This will occur where:

- A single large site is divided up into a series of units, such as an industrial estate or retail park;
- A major development is broken down into a series of smaller planning applications for administrative ease; and
- There are cumulative air quality impacts from a series of unrelated developments in the same area.

In the first two cases, the cumulative impact will be addressed by the likelihood that a single developer will bring forward an outline application for the whole site which should include an air quality assessment as part of an Environmental Impact Assessment. For major developments that are broken down into a series of smaller planning applications, the use of a 'Master or Parameter Plan' that includes an air quality assessment will address the cumulative impact.

Appendix 4 - Electric Vehicle Charging Point Specification:

This shall be the best technology available at the time of planning approval.

EV ready domestic installations

- Cable and circuitry ratings should be of adequate size to ensure a minimum continuous current demand for the vehicle of 16A and a maximum demand of 32A (which is recommended for Eco developments).
- A separate dedicated circuit protected by an RCBO should be provided from the main distribution board, to a suitably enclosed termination point within a garage, or an accessible enclosed termination point for future connection to an external charge point
- The electrical circuit shall comply with the Electrical requirements of BS7671: 2008 as well as conform to the IET code of practice on Electric Vehicle Charging Equipment installation 2012 ISBN 978-1-84919-515-7 (PDF)
- If installed in a garage all conductive surfaces should be protected by supplementary protective equipotential bonding. For vehicle connecting points installed such that the vehicle can only be charged within the building, e.g. in a garage with a (non-extended) tethered lead, the PME earth may be used. For external installations the risk assessment outlined in the IET code of practice must be adopted, and may require an additional earth stake or mat for the EV charging circuit. This should be installed as part of the EV ready installation to avoid significant on cost later.

EV ready commercial installations

Commercial and industrial installations may have private 11,000/400 V substations where a TN-S supply may be available, simplifying the vehicle charging installation design and risk analysis. It is, therefore, essential for developers to determine a building's earthing arrangements before installation. Commercial vehicles have a range of charge rates and it is appropriate to consider a 3-phase and neutral supply on a dedicated circuit emanating from a distribution board. More than one EV charging station can be derived from a source circuit, but each outlet should be rated for a continuous demand of 63Amps. No diversity should be applied throughout the EV circuitry. 3 phase RCBOs should be installed and the supply terminated in a switched lockable enclosure. If an external application (for example car park or goods yard) is selected, the supply should be terminated in a feeder pillar equipped with a multi-pole isolation switch, typically a 300mA RCD, a sub-distribution board (if more than one outlet is fed from the pillar). If an additional earthing solution is required, the earth stake can be terminated within this pillar. See IET guideline risk assessment⁶.

⁶ www.theiet.org/resources/standards/ev-charging-cop.cfm